

# GCC news and announcements

More current news items can be found on the [GCC home page](#).

**January 5, 2007**

Memory SSA, a new representation for memory expressions in SSA form has been contributed by Diego Novillo of Red Hat. This new mechanism improves compile-times and memory utilization by the compiler.

**January 3, 2007**

Trevor Smigiel and Andrew Pinski of Sony Computer Entertainment Inc. have contributed the Synergistic Processor Unit (SPU) port for the Cell Broadband Engine Architecture (BEA).

**January 1, 2007**

2006 has been a very productive year for the new Fortran frontend, with lots of improvements and fixes.

**September 5, 2006**

A forward propagation pass on RTL was contributed by Paolo Bonzini of University of Lugano, and Steven Bosscher while working for Novell.

**May 24, 2006**

GCC 4.1.1 has been released.

**March 10, 2006**

GCC 4.0.3 has been released.

**March 9, 2006**

Richard Henderson, Jakub Jelinek and Diego Novillo of Red Hat Inc, and Dmitry Kurochkin have contributed an implementation of the OpenMP v2.5 parallel programming interface for C, C++ and Fortran.

**March 6, 2006**

GCC 3.4.6 has been released.

**February 28, 2006**

GCC 4.1.0 has been released.

**November 30, 2005**

GCC 3.4.5 has been released.

**October 26, 2005**

GCC has moved from CVS to SVN for revision control.

**September 28, 2005**

GCC 4.0.2 has been released.

**August 22, 2005**

Red Hat Inc has contributed a port for the MorphoSys family.

**July 20, 2005**

Red Hat Inc has contributed a port for the Renesas R8C/M16C/M32C families.

**July 17, 2005**

GCC 4.1 stage 2 has been closed. The following projects were contributed during stage 1 and stage 2: New C Parser, LibAda GNATTools Branch, Code Sinking, Improved phi-opt, Structure Aliasing, Autovectorization Enhancements, Hot and Cold Partitioning, SMS Improvements, Integrated Immediate Uses, Tree Optimizer Cleanups, Variable-argument Optimization, Redesigned VEC API, IPA Infrastructure, Altivec Rewrite, Warning Message Control, New SSA Operand Cache Implementation, Safe Builtins, Reimplementation of IBM ProPolice Stack Detector, New DECL hierarchy. More information about these projects can be found at GCC 4.1 projects.

**July 7, 2005**

GCC 4.0.1 has been released.

**May 18, 2005**

[GCC 3.4.4](#) has been released.

**May 03, 2005**

[GCC 3.3.6](#) has been released.

**April 20, 2005**

[GCC 4.0.0](#) has been released.

**April 12, 2005**

Diego Novillo of Red Hat has contributed a Value Range Propagation pass.

**April 5, 2005**

Analog Devices has contributed a port for the Blackfin processor. See the [Blackfin projects](#) page for more information and ports of binutils and gdb.

**February 06, 2005**

gcc.gnu.org suffered hardware failure and had to be restored from backups. We do not believe any data was lost in the CVS repository. We did lose any pending messages in the mail queue as that does not get backed up. At this time, everything should be functional except for htdig. The mailing list archives on the web site are also out of date and will be updated soon. New mail will update the archives correctly, however. If you find any other problems, please email [overseers@gcc.gnu.org](mailto:overseers@gcc.gnu.org)

**January 27, 2005**

GCC now has a [Wiki](#).

**November 4, 2004**

[GCC 3.4.3](#) has been released.

**September 30, 2004**

[GCC 3.3.5](#) has been released.

**September 9, 2004**

The next major version of GCC following the current 3.4 release series will be called GCC 4.0.

**September 6, 2004**

[GCC 3.4.2](#) has been released.

**July 1, 2004**

[GCC 3.4.1](#) has been released.

**May 13, 2004**

The [tree-ssa branch](#) has been [merged into mainline](#).

**April 20, 2004**

[GCC 3.4.0](#) has been released.

**February 25, 2004**

The [tree-ssa branch](#) has been frozen to be incorporated into GCC 4.0.0. Tree SSA incorporates two new high-level intermediate languages (GENERIC and GIMPLE), an optimization framework for GIMPLE based on the Static Single Assignment (SSA) representation, several SSA-based optimizers and various other improvements to the internal structure of the compiler that allow new optimization opportunities that were difficult to implement before.

**February 24, 2004**

[GCC 3.3.3](#) has been released.

**February 6, 2004**

Josef Zlomek of SUSE Labs and Daniel Berlin of IBM Research have contributed Variable Tracking. It generates more accurate debug info about locations of variables and allows debugging code compiled with `-fomit-frame-pointer`.

**October 18, 2003**

Bernardo Innocenti of Develer S.r.l. has contributed the [m68k-uclinux target](#) and improved support for ColdFire cores, based on former work by Paul Dale (SnapGear, Inc.) and Peter Barada (Motorola, Inc.).

**October 17, 2003**

GCC 3.3.2 has been released.

**August 27, 2003**

Nicolas Pitre has contributed his hand-coded floating-point support code for ARM. It is both significantly smaller and faster than the existing C-based implementation. The arm-elf configuration uses the new code now, and other ports will follow.

**August 8, 2003**

GCC 3.3.1 has been released.

**June 26, 2003**

Ben Elliston of Wasabi Systems, Inc. has converted the existing ARM processor pipeline description to the new DFA pipeline description model. It will be part of the GCC 3.4.0 release.

**May 27, 2003**

Proceedings and photographs of participants are available for the First Annual GCC Developers' Summit, which took place May 25-27, 2003.

**May 14, 2003**

GCC 3.3 has been released.

**April 25, 2003**

GCC 3.2.3 has been released.

**February 05, 2003**

GCC 3.2.2 has been released.

**January 29, 2003**

Andrew Haley of Red Hat completed the work begun by Bo Thorsen of SuSE to port GCI to the AMD x86-64 architecture. This is the first implementation of the Java programming language to be made available on that platform. It will be part of the GCC 3.3 release.

**January 28, 2003**

The ongoing effort to remove warnings from the GCC code base itself, spear-headed by Kaveh Ghazi, has paid off: For our development versions and snapshots, we now enable `-Werror` during a full bootstrap.

**January 22, 2003**

The GCC Steering Committee has named Gabriel Dos Reis as release manager for the upcoming GCC 3.2.2 release, allowing Mark Mitchell to focus his efforts on the GCC 3.3 and 3.4 release series. 3.2.2 is intended to be a bug fix release only.

**January 10, 2003**

Geoffrey Keating of Apple Computer, Inc., with support from Red Hat, Inc., has contributed a precompiled header implementation that can dramatically speed up compilation of some projects.

**December 27, 2002**

Mark Mitchell of CodeSourcery has contributed a new, hand-crafted recursive-descent C++ parser sponsored by the Los Alamos National Laboratory. The new parser is more standard conforming and fixes many bugs (about 100 in our bug database alone) from the old YACC-derived parser.

**December 4, 2002**

Nathan Sidwell of CodeSourcery has contributed an implementation of non-trivial covariant returns for non-varadic virtual functions.

**November 21, 2002**

GCC 3.2.1 has been released. We plan to shortly create the GCC 3.3 release branch (but want to fix a couple of high-priority regressions first).

**August 14, 2002**

GCC 3.2 has been released.

**July 26, 2002**

GCC 3.1.1 has been released.

**July 19, 2002**

Michael Matz of SuSE, Daniel Berlin, and Denis Chertykov have contributed a new register allocator. IBM and Rice University have allowed use of their register allocator software patents

for graph coloring and register coalescing.

**May 28, 2002**

Support for all the systems obsoleted in GCC 3.1 has been removed from the development sources. (These targets can still be restored if a maintainer appears.)

**May 15, 2002**

GCC 3.1 has been released.

**May 5, 2002**

Aldy Hernandez, of Red Hat, Inc, has contributed extensions to the PowerPC port supporting the AltiVec programming model (SIMD). The support, though presently useful, is experimental and is expected to stabilize for 3.2. The support is written to conform to Motorola's AltiVec specs.

**May 2, 2002**

HP and CodeSourcery announced that HP will sponsor Mark Mitchell's work as GCC Release Manager through April 2003.

**April 30, 2002**

Vladimir Makarov, of Red Hat, Inc, has contributed a new scheme for describing processor pipelines, commonly referred to as the DFA scheduler.

**April 15, 2002**

The Chill front end (that already was omitted from GCC 3.0) has been removed from the GCC source tree.

**February 25, 2002**

We have branched for GCC 3.1 (release criteria, changes) and are concentrating on bug fixes. The 3.1 release is planned for late April.

**February 21, 2002**

GCC 3.0.4 has been released.

**February 9, 2002**

Alexandre Oliva, of Red Hat, Inc., has contributed a port to the SuperH SH5 64-bit RISC microprocessor architecture, extending the existing SH port.

**January 24, 2002**

Tensilica has contributed a port to the configurable and extensible Xtensa microprocessor architecture.

**January 14, 2002**

Richard Stallman has changed the licensing of the Classpath AWT implementation to match the licensing of the rest of Classpath. This means that the only remaining barrier to AWT for libgcj is manpower. Work has already begun to merge the Classpath and libgcj AWT implementations.

**January 8, 2002**

SuSE Labs developers Jan Hubicka, Bo Thorsen and Andreas Jaeger have contributed a port to the AMD x86-64 architecture. For more information on x86-64 see <http://www.x86-64.org>.

**December 20, 2001**

GCC 3.0.3 has been released.

**November 3, 2001**

Hans-Peter Nilsson has contributed a port to MMIX, the CPU architecture used in new editions of Donald E. Knuth's The Art of Computer Programming.

**October 25, 2001**

GCC 3.0.2 has been released.

**October 11, 2001**

Axis Communications has contributed its port to the CRIS CPU architecture, used in the ETRAX system-on-a-chip series. See [developer.axis.com](http://developer.axis.com) for technical information.

**October 5, 2001**

Alexandre Oliva of Red Hat has generalized the tree inlining infrastructure, formerly in the C++ front end, so that it is now used in the C front end too.

**October 2, 2001**

Ada Core Technologies, Inc, has contributed its GNAT Ada 95 front end and associated tools. The GNAT compiler fully implements the Ada language as defined by the ISO/IEC 8652 standard.

**September 11, 2001**

Roman Lechtchinsky, Technische Universität Berlin, has donated support for the Cray T3E platform.

**August 29, 2001**

Jan Hubicka, SuSE Labs, together with Richard Henderson, Red Hat, and Andreas Jaeger, SuSE Labs, has contributed infrastructure for profile driven optimizations.

**August 25, 2001**

Geoffrey Keating of Red Hat has donated support for Sanyo's Stormy16 CPU core.

**August 20, 2001**

GCC 3.0.1 has been released.

**August 16, 2001**

The gcc.gnu.org machine will be moving to a new physical location with significantly improved bandwidth and backup on Saturday, August 18th. The move is expected to take less than two hours; DNS will be adjusted accordingly, the new IP address will be 209.249.29.67.

**July 17, 2001**

The Steering Committee adopted a new development plan which we will start using for GCC 3.1, scheduled for April 15, 2002.

**July 9, 2001**

Daniel Berlin and Jeff Law have contributed a Sparse Conditional Constant Propagation optimization pass.

**June 18, 2001**

GCC 3.0 has been released.

**March 16, 2001**

GCC 2.95.3 has been released.

**February 12, 2001**

Our CVS tree has branched for the GCC 3.0 release process and Mark Mitchell, our release manager, has provided some guidelines for the GCC 3.0 branch.

**February 12, 2001**

Hans-Peter Nilsson, our search-engine volunteer, tweaked the search-engine to include all mailing lists (including libstdc++ and GCJ).

**January 28, 2001**

Tom Tromey has moved the Java mailing lists and web pages to gcc.gnu.org. Now the GCJ project is fully integrated into GCC.

**January 21, 2001**

Neil Booth has contributed improvements to the dependency generation machinery of the C preprocessor, adding some new functionality and correcting some undesirable behaviour of the old implementation.

**January 15, 2001**

The GCC development tree is in a slush state, with the goal of stabilization for branching for GCC 3.0.

**December 19, 2000**

The runtime library for the Java front end, libgcj, has been moved into the GCC tree. This means that a separate download will no longer be required for Java support.

**December 4, 2000**

Nick Clifton of Red Hat has donated support for the Intel XScale architecture.

**November 26, 2000**

The C, C++ and Objective C front ends now use the integrated preprocessor exclusively; their independent ability to tokenize an input stream has been removed.

**November 18, 2000**

G++ is now using a new C++ ABI that represents classes more compactly, uses shorter mangled names, and is optimized for higher run-time performance. The implementation of the new ABI was contributed by Mark Mitchell, Nathan Sidwell, and Alexander Samuel of CodeSourcery, LLC.

**November 18, 2000**

GCC now supports ISO C99 declarations in for loops (`for (int i = 0; i < 10; i++) /* ... */`). These are only supported in C99 mode (command line options `-std=gnu99` or `-std=c99`), which will be the default in some future release, but not in GCC 3.0.

**November 14, 2000**

Michael Matz has donated an implementation of the Lengauer and Tarjan algorithm for computing dominators in the CFG. This algorithm can be significantly faster and more space efficient than our older algorithm. For one particularly nasty CFG from complex C++ code (more than 77000 basic blocks) compile time dropped from more than 40 minutes to around 25 minutes. Memory consumption was also dramatically decreased.

**November 13, 2000**

We have now switched the C++ front end to use `libstdc++-v3`, a new implementation of the ISO Standard C++ Library which brings significant changes and improvements over our "old" library. There still be may some rough edges, but we are addressing problems as soon as we learn about them -- please help testing and improving "your" ports!

**November 13, 2000**

GCC now supports two more ISO C99 features:

- The builtin boolean `_Bool` type and the `<stdbool.h>` header. (GCC 2.95 had a non-conforming `<stdbool.h>` header; code that used that header will not be binary compatible with code using the new conforming version.)
- Mixed declarations and code in compound statements.

**November 2, 2000**

The C, C++ and Objective C front ends to GCC now use an integrated preprocessor by default. If all goes well, this will also be the default mode for GCC 3.0.

**November 1, 2000**

Support for C99's `_Pragma` operator has been added to the preprocessor. This feature effectively makes it possible to have `#pragma` directives be part of macro expansions, and to have their arguments expanded too if necessary.

**October 6, 2000**

We would like to point out that GCC 2.96 is not a formal GCC release nor will there ever be such a release. Rather, GCC 2.96 has been the code- name for our development branch that will eventually become GCC 3.0. [More...](#)

**Sep 11, 2000**

Zack Weinberg of Cygnus, a Red Hat company, has contributed modifications to the C, C++, and Objective C compilers which permit them to use the C preprocessor library (`cpplib`) directly instead of via a separate executable.

This is not yet the default mode, but we hope it will be the default in GCC 3.0. When it is used the compiler will be faster because it will not have to do lexical analysis twice, nor save the preprocessed output to a temporary file. In the future, this will permit better error messages, and more detailed debugging information particularly when complex macros are used.

**Sep 11, 2000**

Neil Booth has contributed a new lexer and macro-expander for the C preprocessor. The lexer makes a single pass over the source files, whereas previously it made two. The macro expander operates on lexical tokens instead of text strings.

ISO C, C++, and Objective C use the new preprocessor. Traditional (K+R) C, Fortran, and Chill use an older implementation (taken from GCC 1) which obeys the rules for pre-standard C preprocessing. Either version may be used to preprocess assembly language.

### May 2, 2000

Stan Cox and Jason Eckhardt of Cygnus, a Red Hat company, have contributed a basic block reordering pass. The optimization can reposition basic blocks from across the entire function in an attempt to reduce branch penalties and enhance instruction cache efficiency.

Our thanks go to Michael Hayes, Jan Hubicka, and Graham Stott who noticed or fixed defects or made other useful suggestions.

### May 1, 2000

Richard Earnshaw of ARM Ltd, and Nick Clifton of Cygnus, a Red Hat company, have contributed a new backend for the Arm and Thumb processors.

The new backend combines code generation for the Arm, the Thumb and the StrongArm into one compiler, with the target processor and instruction sets being selectable via command line switches.

### April 30, 2000

Michael Meissner and Nick Clifton of Cygnus, a Red Hat company, have contributed a port for the Mitsubishi D30V processor.

Michael Meissner and Richard Henderson of Cygnus, a Red Hat company, have contributed a new if-conversion pass. The code runs faster and identifies more optimization opportunities than the old code. In addition, it also has support for conditional (predicated) execution, such as is found in the Intel IA-64 architecture, the ARM processors, and numerous embedded LIW and DSP parts.

### March 22, 2000

The Steering Committee has appointed Mark Mitchell, of CodeSourcery, LLC, to manage the GCC 3.0 release and as a new Steering Committee member. CodeSourcery will be providing time from Mark, Alex Samuel, and other personnel, to manage the release. Thanks!

The Steering Committee and the GCC community owe Jeff Law an immense debt for his work as release manager for the EGCS 1.0.x, 1.1.x, and GCC 2.95.x series of releases. He has done an outstanding job.

### March 18, 2000

Andy Vaught has started work on GNU Fortran 95, the Fortran front end destined to implement the latest standard. See this page for its current status.

### March 17, 2000

Jim Wilson and Richard Henderson of Cygnus, a Red Hat company, and David Mosberger of HP labs have contributed a port for the Intel Itanium (aka IA-64) processor.

Jeff Law and Richard Henderson of Cygnus, a Red Hat company, have contributed RTL based tail call elimination optimizations. Support currently exists for the Alpha, HPPA, ia32 and MIPS processors. Long term the RTL based tail call optimizations will be replaced with a tree based tail

call optimizer.

**March 14, 2000**

CodeSourcery, LLC is now providing nightly snapshots of GCC, distributed as RPMs for GNU/Linux on Intel platforms, plus build logs and testsuite results. In order to allow users to more easily confirm whether the current snapshot of GCC fixes a particular bug, an online compilation web form is provided.

**March 13, 2000**

Denis Chertykov contributed an AVR port. AVR is a family of micro controllers made by Atmel with embedded FLASH program memory and embedded RAM. It is the first GCC port to an 8-bit microprocessor with a 16-bit address bus.

**March 9, 2000**

CodeSourcery, LLC and Cygnus, a Red Hat company, have contributed an implementation of static single assignment (SSA) representation. SSA will facilitate the implementation of powerful code optimizations in GCC.

**March 2, 2000**

Jason Molenda, who had a major role in setting up and managing the gcc.gnu.org (originally egcs.cygnus.com) machine and site, is leaving Cygnus. We would like to thank him for his efforts and support behind the scenes and wish Jason all the best in his new job.

**February 23, 2000**

Cygnus, a Red Hat company, contributed an M\*Core port.

**January 4, 2000**

Steve Chamberlain has contributed a picoJava port.

**December 10, 1999**

CodeSourcery, LLC has contributed a new inliner for C++. As a result, the compiler may use dramatically less time and memory to compile programs that make heavy use of templates.

**December 1, 1999**

Cygnus has donated support for the Matsushita AM33 processor (a member of the MN10300 processor family). The MN103 family is targeted towards embedded consumer products such as DVD players, HDTV, etc.

**October 27, 1999**

GCC 2.95.2 is released.

**October 16, 1999**

Craig Burley, our lead Fortran developer and the original author of g77, announced that he will stop working on g77 beyond the 2.95 series. On behalf of the entire GCC team, the steering committee would like to thank Craig for his work.

Craig has written a detailed analysis of the current state and possible future of g77, available at his g77 web site.

If you are interested in helping with g77, please contact us!

**October 12, 1999**

We are pleased to announce that Richard Earnshaw and Jason Merrill have been given global write permissions throughout the GCC sources.

Cygnus has installed various upgrades to improve services for GCC and other open source projects hosted by Cygnus.

**October 11, 1999**

The gcc steering committee welcomes a new member: Gerald Pfeifer. His insights into political issues and his web improvement work were and will be of great use.

**September 21, 1999**



Nick Clifton of Cygnus Solutions has donated support for the Fujitsu FR30 processor. The FR30 is a low-cost 32bit cpu intended for larger embedded applications. It has a simple load/store architecture, 16 general registers and a variable length instruction set.

**September 20, 1999**

Cygnus Solutions has donated two new global optimizers to GCC. [Global Null Pointer Test Elimination](#) and [Global Code Hoisting/Unification](#).

**September 3, 1999**

Long time GCC contributors Mark Mitchell and Richard Kenner have been given global write permissions. They are authorized to install and approve patches to any part of the compiler. Richard Kenner will initially be working on merging in the remaining changes from the old GCC 2 sources.

**September 2, 1999**

Richard Henderson has finished merging the ia32 backend rewrite into the mainline GCC sources. The rewrite is designed to improve optimization opportunities for the Pentium II target, but also provides a cleaner way to optimize for the Pentium III, AMD-K7 and other high end ia32 targets as they appear.

**August 31, 1999**

Cygnus Solutions has released libgcj version 2.95.1 Java runtime libraries for use with GCC 2.95.1.

**August 19, 1999**

[GCC 2.95.1 is released.](#)

**August 4, 1999**

A new snapshot of the new Standard C++ Library V3 has been released. You can find more information from the [libstdc++ project's home page](#).

Cygnus Solutions has released libgcj version 2.95 Java runtime libraries for use with GCC 2.95.

**August 2, 1999**

Mumit Khan has pre-built gcc-2.95 binary packages for Windows platforms.

**July 31, 1999**

[GCC 2.95 is released.](#)

**July 11, 1999**

Cygnus Solutions has donated support for a generic i386-elf target. (Note that this will not be included in gcc 2.95.)

**June 29, 1999**

Cygnus Solutions has donated hpux11 support. (Note that this will not be included in gcc 2.95.)

**June 15, 1999**

Cygnus Solutions has donated a major rewrite of the Intel IA-32 back end, focusing on better optimization for the Pentium II. (Note that this will not be included in gcc 2.95.)

**May 27, 1999**

Toon Moene has emailed (and posted) his notes on the GNU Fortran (g77) Birds-of-a-Feather (BOF) session at LinuxExpo to the appropriate lists, and Craig Burley has made Toon's notes available (in edited form) at <http://world.std.com/~burley/bof.html>.

Probably the most important decision reached at the meeting is that Craig Burley will undertake the long-awaited 0.6 rewrite of the g77 front end as his top priority for the gcc 3.0 release, rather than focusing on implementing some of the most wanted features that didn't require the rewrite, such as Cray pointers.

The BOF provided us with some additional information to guide future development of GNU Fortran. Thanks to all who attended, whether in person or in spirit!

**May 18, 1999**

The sixth snapshot of the ongoing re-written C++ Standard Library has been released. It includes

SGI STL 3.2, an automatically generated `<limits>`, a partially re-written valarray, a working stringbuf and stringstream (for basic types). For more information, please check [libstdc++ home page](#).

**April 23, 1999**

g77 now supports optional run-time checking of array subscript expressions via the `-fbounds-check` compiler option. (The same option applies to whatever bounds-checking applies for other languages, such as Java. The `-ffortran-bounds-check` option specifies bounds-checking for Fortran code.)

**April 20, 1999**

Yes, it is not a hoax: The egcs steering committee is appointed official GNU maintainer for GCC; the egcs team will be responsible for rolling out future GCC releases.

This will require some changes in policy and procedures for the project. We will provide more information on those changes as they are available.

[www.gnu.org](http://www.gnu.org) has the FSF announcement under the "GNU flashes" heading.

**April 15, 1999**

Mark Mitchell is now a co-maintainer of the C++ front end along with Jason Merrill.

**April 13, 1999**

We have set up a new [mailing list gcc-cvs-wwwdocs](#) that tracks checkins to the egcs webpages CVS repository.

**April 7, 1999**

Cygnus announces the first public release of libgcj, the runtime component of the GNU compiler for Java.

[Read the release announcement.](#)

[Goto the libgcj homepage.](#)

**April 6, 1999**

A new snapshot of the C++ standard library re-write has been released. This release includes SGI STL 3.12, a working valarray, and several (but not all) parts of templated iostreams--for more information see: [libstdc++ home page](#).

**March 23, 1999**

Through the efforts of John Wehle and Bernd Schmidt, GCC will now attempt to keep the stack 64bit aligned on the x86 and allocate doubles on 64bit boundaries. This can significantly improve floating point performance on the x86. Work will continue on aligning the stack and floating point values in the stack.

**March 15, 1999**

[egcs-1.1.2 is released.](#)

**March 10, 1999**

Cygnus donates [improved global constant propagation](#) and [lazy code motion optimizer framework](#).

**March 7, 1999**

The egcs project now has [additional online documentation](#).

**February 26, 1999**

Richard Henderson of Cygnus Solutions has donated a major rewrite of the [control flow analysis pass](#) of the compiler.

**February 25, 1999**

[Marc Espie](#) has donated support for OpenBSD on the Alpha, SPARC, x86, and m68k platforms. Additional targets are expected in the future.

**January 21, 1999**

Cygnus donates support for the PowerPC 750 processor. The PPC750 is a 32bit superscalar implementation of the PowerPC family manufactured by both Motorola and IBM. The PPC750 is targeted at high end Macs as well as high end embedded applications.

**January 18, 1999**

Christian Bruel and Jeff Law donate improved local dead store elimination.

**January 14, 1999**

Cygnus donates support for Hypersparc (SS20) and Sparclite86x (embedded) processors.

**December 7, 1998**

Cygnus donates support for demangling of HP aCC symbols.

**December 4, 1998**

egcs-1.1.1 is released.

**November 26, 1998**

A database with test results is now available online, thanks to Marc Lehmann.

**November 23, 1998**

egcs now can dump flow graph information usable for graphical representation. Contributed by Ulrich Drepper.

**November 21, 1998**

Cygnus donates support for the SH4 processor.

**November 10, 1998**

An official steering committee has been formed. Here is the original announcement.

**November 5, 1998**

The third snapshot of the rewritten `libstdc++` is available. You can read some more on libstdc++/.

**October 27, 1998**

Bernd Schmidt donates localized spilling support.

**September 22, 1998**

IBM Corporation delivers an update to the IBM Haifa instruction scheduler and new software pipelining and branch optimization support.

**September 18, 1998**

Michael Hayes donates c4x port.

**September 6, 1998**

Cygnus donates Java front end.

**September 3, 1998**

egcs-1.1 is released.

**August 29, 1998**

Cygnus donates Chill front end and runtime.

**August 25, 1998**

David Miller donates rewritten sparc backend.

**August 19, 1998**

Mark Mitchell donates load hoisting and store sinking support.

**July 15, 1998**

The first snapshot of the rewritten `libstdc++` is available. You can read some more here.

**June 29, 1998**

Mark Mitchell donates alias analysis framework.

**May 26, 1998**

We have added two new mailing lists for the egcs project. gcc-cvs and egcs-patches.

When a patch is checked into the CVS repository, a check-in notification message is automatically sent to the gcc-cvs mailing list. This will allow developers to monitor changes as they are made.

Patch submissions should be sent to egcs-patches instead of the main egcs list. This is primarily to help ensure that patch submissions do not get lost in the large volume of the main mailing list.

**May 18, 1998**

Cygnus donates gcse optimization pass.

**May 15, 1998**

**egcs-1.0.3 released!**

**March 18, 1998**

**egcs-1.0.2 released!**

**February 26, 1998**

The egcs web pages are now supported by egcs project hardware and are searchable with webglimpse. The CVS sources are browsable with the free cvsw package.

**February 7, 1998**

Stanford has volunteered to host a high speed mirror for egcs. This should significantly improve download speeds for releases and snapshots. Thanks Stanford and Tobin Brockett for the use of their network, disks and computing facilities!

**January 12, 1998**

**Remote access to CVS sources is available!**

**January 6, 1998**

**egcs-1.0.1 released!**

**December 3, 1997**

**egcs-1.0 released!**

**August 15, 1997**

The egcs project is announced publicly and the first snapshot is put on-line.

Please send FSF & GNU inquiries & questions to [gnu@gnu.org](mailto:gnu@gnu.org). There are also other ways to contact the FSF.

These pages are maintained by the GCC team.

*For questions related to the use of GCC, please consult these web pages and the GCC manuals. If that fails, the [gcc-help@gcc.gnu.org](mailto:gcc-help@gcc.gnu.org) mailing list might help.*

*Please send comments on these web pages and the development of GCC to our developer mailing list at [gcc@gnu.org](mailto:gcc@gnu.org) or [gcc@gcc.gnu.org](mailto:gcc@gcc.gnu.org). All of our lists have public archives.*

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